

ClaimsPCT/FI03/00241
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1. Method for treating a particulate carrier for an inhalation powder improv-
ing stability and flow properties of the carrier, **characterized** in that carrier
5 is abraded suspended in a liquid medium into which the carrier is essentially
insoluble, the liquid medium is removed and the carrier recovered.
2. Method according to claim 1, **characterized** in that the carrier is abraded
10 with a mixing device using an effect below that required for crushing the car-
rier particles.
3. Method according to claim 1 or 2, **characterized** in that the rotation
speed of the mixing device is lowered during the treatment.
- 15 4. Method according to any of claim 1 to 3, **characterized** in that the carrier
suspension is cooled and recirculated to the mixer.
5. A method according to any of the preceding claims, **characterized** in
that the suspension is recirculated through a filter.
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6. A method according to claim 5, **characterized** in that a certain desired
size range or ranges are recirculated to the mixing device.
7. A method according to any of the preceding claims, **characterized** in
25 that said media is a hydrocarbon, perfluorinated ether, fluorinated ether,
perfluorinated hydrocarbon, fluorinated hydrocarbon, methanol, ethanol or
any other alcohol or hydrocarbon.
8. A method according to any of the preceding claims, **characterized** in
30 that said carrier after filtration is used undried for formulation.
9. A method according to any of the preceding claims, **characterized** in
that said carrier is dried after filtration and stored for future used.

10. A method according to any of the proceeding claims, **characterized** in that the abraded carrier is at least partly covered particles smaller in size than said carrier.

5 11. A method according to claim 10, **characterized** in that the abraded carrier and the small sized particles are of the same material.

10 12. A method according to any of the proceeding claims, **characterized** in that the carrier to be abraded is lactose or a monohydrate thereof, glucose, mannitol, trehalose, sucrose, any other sugar, polysaccharide or any other compound used as a carrier.

15 13. Carrier for an inhalation powder, which carrier is stable and possesses good flowing properties, **characterized** in that the carrier is abraded suspended in a liquid medium, in which said carrier is essentially insoluble.

20 14. Carrier according to claim 13, **characterized** in that that the carrier is abraded with a mixing device using an effect below that required for crushing the carrier particles.

25 15. Carrier according to claim 13 or 14, **characterized** in that the carrier is filtrated and used for formulation undried or dried and stored for future use.

30 16. Carrier according to any of the claims 13 - 15, **characterised** in that the filtrated carrier contains more than one main range of particle sizes of abraded carrier.

17. Carrier according to any of the proceeding claims, **characterized** in that the carrier to be abraded is lactose or a monohydrate thereof, glucose, mannitol, trehalose, sucrose, any other sugar, polysaccharide or any other compound used as a carrier.

18. Preparation for inhalation purposes comprising an active agent, a carrier and optional excipients used in inhalable preparation, **characterized** in that at least a part of the carrier used is abraded suspended in a liquid medium, in which the carrier is essentially insoluble.

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19. A preparation according to claim 18, **characterized** in that carrier contains more than one main range of particle sizes.